

MASTER PROGRAMME IN MANAGEMENT ENGINEERING AND INTEGRATED LOGISTICS AT THE UNIVERSITY OF TRIESTE AND HOCHSHULE OSTWESTFALEN-LIPPE

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THE CHALLENGE

The relationship between the University of Trieste (UNITS) and the University of Applied Sciences-Lippe (Hochschule OstWestfalen-Lippe, HS-OWL), based in Lemgo in Germany, dates back to 2008, when an intensive course was promoted and conducted in Pordenone by the German side. It was a one week English language course (50 hours) on “Stationarity Wood Machining”, and it was immediately welcomed by the President of the three-years degree course in “Engineering management and integrated logistics”, prof. D. Pozzetto. The following year, with the participation of Prof. M. Nicolich, a Summer School was organized in Lemgo, to which 25 other students from Trieste were admitted alongside the same number of European students.

The *Kreis* of Lippe is characterized by an important industrial presence for the production of furniture very similar to the *Livenza furniture* district with which the two universities operate, both with specific courses in their study plans. Based on these experiences, the idea arose to integrate the activities in a Degree Course in English language profitable for students and industries, which could give to new Management Engineers an international imprint and homogenization of the university preparation.

Teachers of the two universities started working on the project. Between 2010 and 2011, they met several times with representatives

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of the top management of the companies of the two areas, as well as with Industrial and Services Associations, in order to find a solution with European significance, such as the Double Degree: the Italian title issued by UNITS plus the German title issued by HS-OWL.



In the respective Faculties and Administrations, the initiative was welcomed. The collaboration for the success of the proposal was great, both on academic and administrative level.

At the same time, the promoting teachers discussed the drafting of the study plans, their contents and the structure to be given to the university course, in compliance with the rules indicated by the European Union: Bologna Process and Dublin Descriptors. The long planning work led in 2011 to the signing of Didactic and Executive Agreements, and to the activation of the Double Degree Master Programme in the academic year 2011-2012.

THE SOLUTION

Thanks to this work, the former Master's Degree Programme in *Management Engineering and Integrated Logistics*, coordinated by prof. M. Nicolich and active in Pordenone (where a campus of the University of Trieste is located), changed to the International Double Degree Programme in *Production Engineering and Management*.

The Degree programme takes its basic contents from the former programme and integrates them with the know-how of the wood-furniture industry sector. This international programme offers, even more than the previous one, a greater satisfaction of the specific needs of those who hold managerial positions in medium-sized companies in both regions, OstWestfalen-Lippe and Friuli-Venezia Giulia.

The study course has been built by distributing the Study Plan for 120 ECTS (European Credit Transfer System) between the two Universities in the following way:

- 1st Semester: students attend lectures at their own University, 28 ECTS;
- 2nd Semester: HS-OWL students come to Pordenone (Italy), to attend classes together with the UNITS students, 30 ECTS;
- 3rd Semester: UNITS students go to Lemgo (Germany) to attend classes together with the HS-OWL students, 30 ECTS;
- 4th Semester: at the university of origin, lectures for 8 ECTS, Internship for 6 ECTS and thesis work for 18 ECTS.

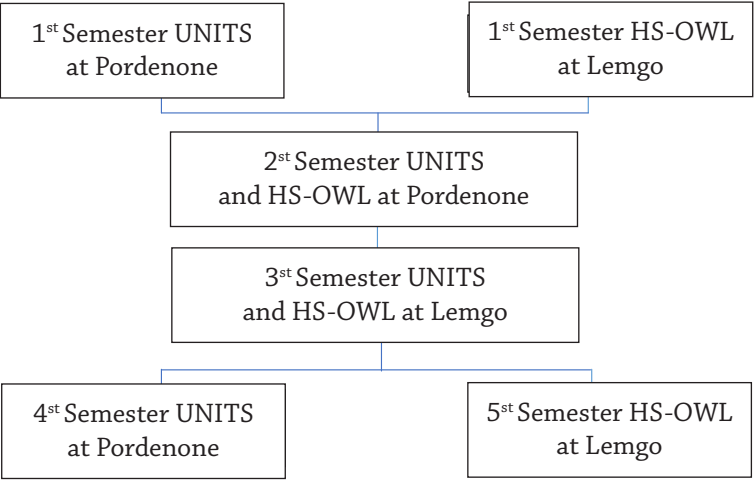


Figure 1: Design of the programme



The UNITS had at the time already structured courses in English at local and inter-university level with teaching collaborations with European universities (Regensburg). The Double Degree had not yet been considered and the Trieste Administration faced the problem with enthusiasm, defining in detail all the procedures together with the colleagues of Lemgo. Compliance with the European rules for university education was fundamental.

The first students to be involved immediately realized the great opportunity, but they raised the problem of the language. Previously, only marginal attention had been paid to English. From that time onward, it was therefore decided to provide English conversation seminars with a native speaker.

The enrolment of students is based on a defined number of places (20) for each University, with an admission test based on the evaluation of the previous curriculum (Bachelor's Degree) and of an English proficiency (B2 level). With these requisites and with the level of services offered by the two universities, the courses finally begun in the academic year 2011-2012.

THE RESULTS

Even though there is no Bachelor degree course directly connected to the Double-Degree Master course, and this initially affected the number of applications, this gap has gradually been recovered in the following years by attracting students with Bachelor degree courses from all over the Region and from other Italian universities. In addition, one of the many results was that teaching in English has also attracted international students.

The surrounding industrial labour market, which already was in close contact with the professors teaching in Pordenone, highly appreciated the new professional profile of the Management Engineer. They pointed out that, besides the English fluency, the engineers had also achieved confidence with extra-national environments in approaching industrial activities.

Other immediate benefits were and are the job opportunities given to students closely after graduation, also thanks to the acquired English proficiency and to the technological innovation competences gained during their studies. Moreover, networking with another European university, and the opportunity to interact and study together in the same environment with students of many different countries has been the best way to promote cultural integration.



The employment of graduates is well above 90% after one year from graduation, and still the market demand is not satisfied. The companies in which the graduates find employment, are international and often constitute large industrial groups, e.g., Accenture, Amadeus Group (Spain), Danieli Engineering, Electrolux Professional, General Electric Healthcare, Luxottica, Management Solution (Spain), Maschio Gaspardo, Pittini, Safilo, Snaihero SpA and Tarafan (Turkey). Mainly the offered job positions are: Commercial Executive, Industrial Engineer, Product Engineer, Production Engineer, Production Planner, Project Manager and Responsible for Technology Innovation.

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The orientation, originally set towards the furniture production, was not particularly attractive for students, who preferred the production management sector. For this reason, the two partner universities changed the study plan, offering two paths: one concentrating on furniture production and the other one on industrial manufacturing management, giving emphasis to the development of some Industry 4.0-enabling technologies. In fact, the HS-OWL Campus offers the opportunity to make use of the second *Smart Factory* laboratory in Germany, set up in 2016 in collaboration with the Fraunhofer Institute for Industrial Automation.



CONCLUSION AND RECOMMENDATIONS

Designing and launching a successful double-degree programme in English has been challenging, constructive, satisfying and most of all, it has brought its major results in the great job opportunities offered to graduated students. Moreover, the programme enables interaction of both professors and industrial actors by stimulating discussion, exchange of ideas and practices that result in a continuous quality improvement of the programme.